

# Accountability in Graduate Medical Education: Exploring Federal Investment, Policy Momentum, and Strategic Workforce Planning

Discussion Paper for a Workshop of the National Academies of Sciences, Engineering, and Medicine

January 26, 2026

## Authors:

**Diane Rittenhouse, MD, MPH**<sup>1</sup> is a senior fellow at Mathematica and a professor of family medicine and health policy at University of California, San Francisco.

**Robert L. Phillips, Jr., MD, MSPH**<sup>1</sup> is the executive director of the American Board of Family Medicine Center for Professionalism and Value in Health Care. He practices in a community-based residency program in Fairfax, Va., and is professor of family medicine at Georgetown University and Virginia Commonwealth University.

**Christopher R. Cogle, MD**<sup>1</sup> is professor at the University of Florida, Chief Medical Officer for Florida's Agency for Health Care Administration, and Director of the Florida Health Policy Leadership Academy.

**Yalda Jabbarpour, MD**<sup>1</sup> is a family physician in Washington, DC, and director of the Robert Graham Center for Policy Studies and Associate Professor and Vice Chair of Research in the Department of Family Medicine at Georgetown University.

**Lori Rodefeld, MS**<sup>2</sup> is the deputy director of the Teaching Health Center and Rural Residency Planning and Development – Technical Assistance Centers. She is also the director of Rural GME Development at the Wisconsin Collaborative for Rural Graduate Medical Education.

**Emily Morris Hawes, PharmD, BCPS, CPP**<sup>2</sup> is a professor at the University of North Carolina at Chapel Hill School of Medicine and serves as director of the Teaching Health Center and Rural Residency Planning and Development Technical Assistance Centers. She practices as a clinical pharmacist practitioner in a family medicine clinic in rural North Carolina and serves on the board of a federally qualified health center in Boone, North Carolina.

---

<sup>1</sup> The authors declare no competing interests or disclosures. The authors are solely responsible for the content of this paper, which does not necessarily represent the views of the National Academies of Sciences, Engineering, and Medicine.

<sup>2</sup> Emily M. Hawes and Lori Rodefeld have part of their time funded by the Technical Assistance Centers for the Rural Residency Planning and Development (RRPD), Teaching Health Center Planning and Development (THCPD), and Teaching Health Center Graduate Medical Education (THCGME) programs, which provide technical assistance to the RRPD, THCPD, and THCGME grant recipients. The TACs are supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under cooperative agreement #UK6RH32513, cooperative agreement #U3LHP45321-01-00, and contract #75R60224C00016. The contents of this article are those of the authors and do not necessarily represent the official views of, nor an endorsement by, HRSA, HHS, or the U.S. Government. The authors are solely responsible for the content of this paper, which does not necessarily represent the views of the National Academies of Sciences, Engineering, and Medicine.

## Acknowledgements:

*The National Academies of Sciences, Engineering, and Medicine and the authors* gratefully acknowledge the individuals and organizations that contributed their time, expertise, and insights to this discussion paper.

## Reviewers:

**Sanjay Desai, MD** serves as the Chief Academic Officer at the American Medical Association (AMA)

**Marc Meisnere, MHS** serves as a Senior Program Officer at the National Academies of Sciences, Engineering, and Medicine

**Sunita Mutha, MD** is the Director of the Healthforce Center and a Professor of Medicine at UC San Francisco

**Kathryn E. Phillips, MPH** is an associate director for the California Health Care Foundation and served as liaison to the sponsors

## Sponsors:

**American Board of Family Medicine (ABFM)** is a not-for-profit, private organization which provides independent assessments of qualifying family physicians.

**American Board of Internal Medicine (ABIM) Foundation** is an operating charity that develops and implements projects in support of its mission to advance the core values of medical professionalism as a force to improve the quality of health care.

**Arnold Ventures** is a philanthropy that supports research to understand the root causes of America's most persistent and pressing problems, as well as evidence-based solutions to address them. By focusing on systemic change and bipartisan policy reforms, Arnold Ventures works to improve the lives of American families, strengthen communities, and promote economic opportunity

**The California Health Care Foundation** is an independent, nonprofit philanthropy that works to improve the health care system so that all Californians have the care they need.

**The Commonwealth Fund** supports independent research on health care issues and make grants to promote better access, improved quality, and greater efficiency in health care.

*"Those responsible for medical education...will, in decades ahead, need to devote careful attention to appraising the needs of society for health care and health personnel and to developing and implementing plans to meet to those needs. Failure to do so will damage the standing of the profession and educational institutions and will invite—even make necessary—less desirable approaches to meeting the health care needs of a growing America. If those responsible for medical education fail to assume and act on a responsibility that is now clearly theirs, it will be assumed by others."*

— Dr. Lowell Coggeshall

Association of American Medical Colleges, Coggeshall Report, 1965<sup>1</sup>

## Introduction: Why This Conversation Matters

Graduate Medical Education (GME)—the residency and fellowship training required for medical licensure in the United States—plays a central role in shaping the physician workforce. Each year, nearly 50,000 physicians enter residency training, supported by nearly \$30 billion in public funding, primarily through Medicare and Medicaid.<sup>2–5</sup> These investments influence not only the number of physicians entering practice, but also their specialty choice, geographic distribution, clinical setting, and healthcare services offered - factors that directly affect patient access to care.

A substantial body of evidence demonstrates that GME functions as a powerful workforce policy instrument. Physicians are significantly more likely to practice near where they complete residency training, particularly within the same state or region.<sup>6,7</sup> Training location and structure are also strongly associated with practice in rural and underserved areas, with residents exposed to rural, safety-net, or community-based training environments more likely to serve similar populations after graduation.<sup>8–13</sup> In addition, residency program characteristics, including institutional mission, training site mix, and emphasis on primary care, are associated with specialty choice, with some programs producing substantially higher proportions of primary care physicians than others.<sup>14</sup> Collectively, this evidence underscores that where and how GME funds are allocated matters—and that many GME workforce outcomes are currently measurable.

Over the past decade, targeted federal and state initiatives have sought to better align GME investments with population health needs, although these efforts have not always aligned with Congressional intent.<sup>15</sup> Programs such as Medicare-funded rural track programs, Teaching Health Center GME, Medicaid-supported residencies, and state-funded GME expansion efforts have contributed to an increase in residency training in rural and community-based settings.<sup>3,16,17</sup> These initiatives demonstrate that financing mechanisms, regulatory flexibility, and intentional placement of training sites can influence physician workforce outcomes and access to care.

Despite this progress, the majority of GME funding remains concentrated in urban, hospital-based programs and is not aligned with national workforce needs or health outcomes. Medicare's GME financing structure, largely tied to legacy residency caps and geographic distributions established in the 1990s, provides limited flexibility to respond to population shifts, evolving specialty shortages, or changes in care

delivery toward outpatient and community settings.<sup>18,19</sup> As a result, many of these newer training programs designed to meet workforce needs are funded by appropriations and subject to reauthorization, making them less secure than most hospital-based training supported by Medicare entitlement funds. The lack of rational GME planning and payment is due to the fact that the United States lacks a comprehensive national physician workforce plan to guide GME investment across Medicare, Medicaid, and other federal programs. As the late Dr. Fitzhugh Mullan piquantly observed in 2014, the GME system remains “anencephalic” - funded but lacking a coordinated strategy.<sup>20</sup>

A frequently cited barrier to cohesive workforce planning at the federal level is the absence of standardized accountability data. Medicare GME funds flow directly from CMS to hospitals participating in training without systematic feedback on whether these investments produce a physician workforce aligned with community needs. Without common metrics, it is difficult to assess the impact of individual residency programs or sponsoring institutions. To address this gap, researchers at the Robert Graham Center for Policy Studies in primary care developed the [GME Impact Quotient \(GME-IQ\)](#) - an objective, reproducible score designed to measure sponsoring institutions' contributions to workforce goals. For primary care, the GME-IQ assesses the proportion of residents who remain in primary care and who practice in shortage areas or communities with high social disadvantage, as defined by the Social Deprivation Index. Parallel measures exist for surgery and psychiatry residencies.<sup>21</sup> By providing a clear accountability metric, GME-IQ enables states to determine whether institutions meet population health needs and allows CMS to identify programs addressing Medicare beneficiaries' needs, supporting more strategic allocation of resources.

Since the 2014 Institute of Medicine report on GME, federal advisory bodies have repeatedly called for greater accountability, transparency, and strategic direction in GME. Reports from the Medicare Payment Advisory Committee (MedPAC), the Government Accountability Office (GAO), the Institute of Medicine (now the National Academy of Medicine), and the American Medical Associations' Council on Graduate Medical Education have emphasized the need for improved data on training outcomes, clearer alignment between public investment and public need, and stronger coordination across federal agencies.<sup>22-26</sup> Although recent legislation has reinforced expectations for accountability and workforce alignment, implementation has been uneven, fragmented, and constrained by statutory and regulatory limitations.

This discussion paper is intended to inform a national dialogue on the future of accountability in GME financing. Rather than proposing specific policy solutions, it synthesizes evidence on how GME influences workforce outcomes, reviews recent federal and state policy developments, and highlights emerging state-level innovations. It also identifies unresolved questions regarding data infrastructure, financing mechanisms, and the respective roles of federal and state actors. The accompanying National Academies of Sciences, Engineering, and Medicine (NASEM) workshop [“Exploring Opportunities to Improve Patient Access to Care through Strategic Changes to Graduate Medical Education”](#) convenes policymakers, educators, researchers, and stakeholders to examine these issues and explore how public investment in GME can be more effectively aligned with the nation's evolving health care needs.

## Federal Policy Context: Persistent Calls for Greater GME Accountability

Over the past 15 years, a series of federal reports and expert panels have raised concerns about the lack of transparency, strategic direction, and measurable outcomes associated with GME funding. Together, these assessments have produced a steady drumbeat of recommendations emphasizing the need for greater accountability, clearer alignment with workforce needs, and more strategic use of public investment.

### A. MedPAC and GAO: Early Federal Signals of Concern

In 2010, the Medicare Payment Advisory Commission (MedPAC) concluded that Medicare's GME payments were poorly aligned with national health needs. It recommended linking payments to residency outcomes, addressing physician maldistribution, and developing a national workforce strategy.<sup>27</sup> Around the same time, the Government Accountability Office (GAO) began issuing a series of reports highlighting the absence of a coordinated federal approach to physician workforce planning.

By 2015, the GAO explicitly called on the Department of Health and Human Services (HHS) to lead a comprehensive strategy for aligning GME funding with areas of greatest need.<sup>28</sup> Follow-up reports in 2017 and 2018 documented persistent imbalances: 98% of residents remained concentrated in urban areas, and subspecialty training was growing twice as fast as primary care.<sup>19,22</sup>

The GAO emphasized that without better data and coordination, federal investments would continue to fall short of addressing national physician shortages and population health needs.

### B. IOM Consensus Report: A Blueprint for GME Reform

The Institute of Medicine's 2014 consensus report, Graduate Medical Education That Meets the Nation's Health Needs, provided a sweeping critique of the GME system.<sup>20</sup> It described a fragmented structure with limited accountability and a misalignment between federal funding and population health needs. The report proposed:

- Establishing a GME Policy Council and a GME Center within HHS.
- Creating two subsidiary funds: an Operational Fund for existing programs and a Transformational Fund for innovation and workforce alignment.
- Linking GME funding to measurable outcomes such as specialty choice, geographic distribution, and service in underserved areas.

The IOM emphasized that the lack of reliable data on GME outcomes made it difficult to assess the impact of training programs or guide policy decisions. It called for a shift from a hospital-centric model to one that supports community-based training and prioritizes national health goals.

### C. 2017 NASEM Workshop: Defining GME Outcomes and Metrics

In 2017, the National Academies of Sciences, Engineering, and Medicine (NASEM) convened a workshop titled Graduate Medical Education Outcomes and Metrics,<sup>29</sup> which brought together leaders from

academic medicine, federal agencies, and accrediting bodies to explore how GME outcomes could be defined, measured, and used to inform policy.

Key themes included:

- The absence of a national system to track GME outcomes.
- The need for consensus on key metrics, including specialty mix, geographic distribution, service in underserved areas, and clinical competence.
- The importance of standardized data collection and national comparators.
- The potential of health IT and big data to enable large-scale tracking and research.
- The value of linking federal GME funding to performance and public reporting.

Participants emphasized that without systematic data collection and analysis, it would remain difficult to improve the quality, efficiency, and equity of physician training. However, they also noted that data and methods were available to do routine outcome analysis. The workshop did not produce consensus recommendations, but catalyzed a shared recognition that accountability needs to be built into the GME system.

#### **D. CARES Act and COGME: Formalizing federal expectations**

The 2020 CARES Act (Section 3401) required HHS to develop a comprehensive and coordinated plan for all workforce development programs, including GME.<sup>30,31</sup> It mandated performance measures to assess how these programs strengthen the healthcare system and formalized the expectation that GME be evaluated for its contribution to national health priorities.

In parallel, the Council on Graduate Medical Education (COGME) issued its 24th report and a series of rural issue briefs.<sup>18</sup> These documents called for:

- A federal assessment of rural health needs to identify gaps in essential care.
- Measures to ensure value and return on public investment in GME.
- CMS mechanisms for financial accountability tied to downstream outcomes such as patient care, population health, and physician wellbeing.

Together, these developments reflect a growing and sustained consensus that GME policy must evolve to better meet the needs of a changing healthcare system. Across multiple federal advisory bodies, there is broad agreement on the need for clearer goals, improved data on training outcomes, and stronger accountability for public investment.

### **Recent Federal Policy and Regulatory Actions**

Recent federal policy and regulatory changes reflect growing recognition of long-standing limitations in Medicare's GME financing framework, particularly its limited responsiveness to workforce shortages in rural and underserved communities. Rather than creating accountability requirements or mechanisms for workforce outcomes, these efforts represent a series of targeted interventions designed to expand

training capacity, reduce regulatory barriers, and support residency development in settings historically underserved by Medicare GME financing. Again, these strategic efforts to improve production of needed physician workforce have largely been financed out of appropriations making them more tenuous.

Early federal efforts to address rural workforce needs included provisions in the Balanced Budget Refinement Act of 1999, which allowed hospitals to increase their GME caps for separately accredited rural training tracks, albeit within a limited cap-building window. Despite these provisions, growth in Medicare-supported residency positions remained overwhelmingly concentrated in non-generalist specialties and urban settings—98 percent of new positions added between 2005 and 2015—highlighting the limits of incremental adjustments within existing statutory constraints.<sup>19, 32–34</sup>

More recent legislation has sought to accelerate progress. The Consolidated Appropriations Act (CAA) of 2021 Section 126 authorized 1,000 new Medicare-funded residency positions, with statutory criteria favoring rural hospitals and health professional shortage areas.<sup>35–38</sup> To date, however, the majority of these positions have not reached rural or underserved settings. The CAA also included several provisions intended to reduce regulatory barriers to rural training. Section 127 eliminated the requirement for separate accreditation of Rural Track Programs (RTPs), allowing rural tracks to be established within existing accredited programs, and permitted urban teaching hospitals to sponsor additional rural tracks in the same specialty when more than half of training occurs in rural settings. In addition, Section 127 removed the Medicare three-year rolling average during cap-building, enabling rural programs to receive higher reimbursement earlier in the start-up phase.<sup>37</sup> Section 131 further allowed certain hospitals to reset low full-time equivalent (FTE) caps and per resident amounts (PRAs), provisions particularly relevant to rural hospitals. Early uptake of this option has been modest: as of 2025, only 23 of 219 eligible hospitals (approximately 10.5 percent) had reset their FTE caps to launch new residency programs.

Regulatory changes have complemented legislative action. A 2019 Medicare rule enabled urban hospitals to claim resident costs and Medicare reimbursement for time spent training at Critical Access Hospitals and Rural Emergency Hospitals when these sites are treated as non-provider sites.<sup>40</sup> Since passage of the CAA of 2021, the number of rural track programs has increased, and engagement by Critical Access Hospitals has expanded substantially, with nearly 100 now serving as participating training sites.<sup>17,37,41</sup> This growth reflects not only changes in Medicare reimbursement policy, but also streamlined accreditation processes for rural tracks and federal investments supporting the creation of new rural residency programs.

Recognizing the challenges of developing GME capacity in resource-limited settings, the Health Resources and Services Administration (HRSA) has played a complementary role. HRSA's Rural Residency Planning and Development (RRPD) Program provides start-up funding and technical assistance to help rural health facilities establish accredited residency programs largely sustained through Medicare financing. As of December 2025, the program has supported the creation of 62 new residencies in family medicine, internal medicine, psychiatry, and general surgery, representing more than 750 accredited resident positions at full complement.<sup>17, 42</sup> More than one-quarter of rural residencies nationwide have been established with RRPD support.

HRSA has also expanded community-based training through the Teaching Health Center Graduate Medical Education (THCGME) program, which since 2010 has funded residency training in federally

qualified health centers (FQHCs) and other outpatient settings that cannot directly access Medicare GME financing. The program currently supports more than 1,096 residents across 81 community-based residency programs.<sup>17,43</sup> A growing body of evidence demonstrates that THCGME graduates are significantly more likely to practice in rural and underserved areas compared to graduates of non-THC programs.<sup>43,44</sup> Building on this model, HRSA's Teaching Health Center Planning and Development (THCPD) program provided seed funding and technical assistance in 2021 and 2022 to expand residency development in FQHCs. As of late 2025, 44 new programs have been accredited, representing more than 560 approved resident positions at full complement. Sustained expansion of these programs, however, remains dependent on continued THCGME grant funding to support ongoing residency operations. With increased and sustained THCGME funding, the THCPD program has the potential to nearly double the existing footprint of the current Teaching Health Center program, one of the most successful programs for rural and underserved physician workforce production.<sup>43, 45</sup>

Other federal agencies have pursued parallel strategies. Veterans Affairs programs authorized under the Veterans Access, Choice, and Accountability Act of 2014 and the MISSION Act of 2018 have expanded GME training in rural and underserved settings. In 2025, the VA GME Pilot began funding salaries and benefits for physicians rotating to non-VA facilities operated by Indian tribes or tribal organizations, the Indian Health Service, the Department of Defense, and FQHCs.<sup>46</sup> Other efforts are underway to extend GME into tribal communities, which are largely concentrated in rural areas.<sup>47</sup> In 2025, the Indian Health Service established a Division of Academic Affairs to strengthen residency training in tribal communities.<sup>47</sup> Likewise, federal support of decentralized training models, including rural tracks, further increases the likelihood that physicians will ultimately practice in areas with limited access to care.<sup>49,17</sup>

Taken together, these federal initiatives represent meaningful progress toward addressing workforce gaps, particularly in rural and underserved settings. However, they are incremental and largely programmatic, rather than part of a comprehensive, coordinated national strategy for GME accountability and workforce planning. As a result, longstanding concerns about federal GME financing alignment, accountability, and workforce impact persist. They also offer proven models that the larger, Medicare-funded GME program could build on to increase accountability to the nation's physician workforce needs. They also offer states means of improving the effectiveness of state GME funding.

## State-Level Strategies to Align GME Policy with Workforce Needs

In the absence of a coordinated national strategy and sustained federal leadership, responsibility for addressing physician workforce gaps has increasingly fallen to states—often without clear guidance, shared metrics, or sufficient resources. State responses have been uneven and largely piecemeal, with a limited number of states attempting more comprehensive approaches to GME policy and workforce planning. Some states have used combinations of Medicaid financing, state appropriations, licensure reforms, and workforce data infrastructure, to develop “grow your own” approaches to expand residency training in priority specialties, settings, and regions.<sup>3, 50</sup> State use of Medicaid funding for GME nearly doubled in the last decade, and state resources committed to GME have similarly increased.<sup>3</sup> In several cases, states have moved beyond direct funding to offer technical assistance supporting program development, accreditation, financial planning, faculty development, and long-term sustainability, while also convening stakeholders to assess progress and impact.

The examples that follow illustrate different state strategies for aligning GME policy with workforce needs. Although such efforts are not widespread, they provide practical examples of how data-informed workforce planning and accountability mechanisms can be used to align public investment in GME with workforce outcomes within existing statutory frameworks.<sup>3</sup>

## **Wisconsin**

Wisconsin's approach to rural physician shortages evolved from early system fragility toward deliberate state-level investment in GME infrastructure. In the early 2000s, most of the state's rural training tracks closed as financial and operational pressures outpaced available support, revealing vulnerabilities in the state's initial approach to rural workforce development.<sup>51</sup> These closures highlighted the need for sustained technical and organizational support, leading to the development of the Wisconsin Collaborative for Rural GME (WCRGME) as a capacity-building resource for both emerging and existing rural programs.<sup>52</sup> Legislative action in 2023 marked a key policy milestone, increasing funding for new program development to \$1 million and expanding per-resident support, while consortium investments further reinforced rural training infrastructure, particularly in northern Wisconsin.<sup>53</sup>

Collaboration among key stakeholders, including the Wisconsin Hospital Association, Rural Wisconsin Health Cooperative, University of Wisconsin, rural hospitals, and academic medical centers, was critical to designing a comprehensive plan for GME growth. These partners aligned resources and strategies to address immediate shortages and ensure long-term sustainability. The state prioritized both primary care and high-need specialties, embedding accountability measures such as required rural training and retention goals. Importantly, Wisconsin adopted a flexible approach to rural program design rather than adhering strictly to CMS Rural Track Program requirements, which mandate over 50% rural training, a threshold difficult to achieve in certain specialties. This flexibility enabled growth in surgery, obstetrics, and psychiatry programs alongside family medicine.

Funding supports capacity building through rural rotation development, curriculum enhancement, and feasibility studies, complemented by WCRGME's technical assistance in accreditation, scenario planning, financial planning, marketing support, and faculty development.<sup>54</sup> Impact is monitored through annual surveys and program reporting to the Department of Health Services, ensuring accountability and informing future strategy. Since 2009, Wisconsin has added 31 new programs or tracks and over 300 residency positions, all with required rural training. More than 60% of graduates from expansion positions practice in-state, with the majority in rural communities.

## **Indiana**

Indiana has pursued a structured approach to expand GME through the creation of the GME Board established in 2015 by House Enrolled Act 1323.<sup>55</sup> This legislation created the Medical Residency Education Fund and charged the GME Board with developing a statewide plan to grow residency capacity, particularly in high-need specialties and underserved regions. The GME Board's governance structure includes representatives from medical schools, hospital associations, and physician organizations, ensuring broad stakeholder engagement and alignment with workforce priorities.<sup>56</sup>

The GME Board provides a tiered funding model to support GME growth: feasibility grants of up to \$75,000 for hospitals assessing readiness to host a residency program; program development grants of up to \$500,000 over two years to build new programs and hire program directors; and residency expansion grants of \$45,000 per resident to increase training capacity.<sup>57-59</sup> These funds can also cover infrastructure costs and support residents who are not federally funded. Recent awards have supported new programs in family medicine, psychiatry, internal medicine, OB/GYN, and general surgery across multiple regions.<sup>60</sup>

Since inception, Indiana has invested \$42.8 million through 68 grants, funding 265 residency positions across 24 institutions. Nine new residency programs have been launched with GME Board support, and five additional programs are expected by mid-2026, with anticipated growth of 30 more residents by 2027. These efforts are critical given Indiana's historically low GME density, 2.20 programs per 100,000 population which is lower than neighboring states. Workforce projections underscore the urgency: Indiana faces shortages of more than 300 family medicine physicians by 2035, and only 58% of physicians trained in-state between 2012 and 2021 remain in Indiana, highlighting the importance of expanding local training opportunities.<sup>61</sup>

Indiana's strategy reflects the intersection of policy, targeted funding, and collaborative governance to address physician shortages. By prioritizing feasibility studies, program development, and expansion grants, the state is building a foundation that will leverage the established partnerships for growth in rural and underserved areas.

## **Florida**

In Florida, 15 of 78 ACGME-accredited residency training institutions (19%) are rural or safety-net practices and collectively train roughly half of the state's 6,000 resident physicians.<sup>62</sup> Through its Medicaid State Plan, Florida provides over \$1 billion annually in direct GME and indirect medical education (IME) payments to teaching institutions, 44% of that funding coming from state general revenue and 56% from federal match.<sup>63</sup> Florida's direct GME funding is organized through seven legislatively authorized programs addressing priority workforce shortages, including primary care, psychiatry, mental health, rural practice, and high-acuity specialty care (§ 409.909, Florida Statutes).

Florida also operates a Medicaid directed payment program for teaching faculty physicians and dentists under 42 C.F.R. § 438.6(c), allowing Medicaid managed care plans to pass federally matched supplemental payments to faculty group practices. Each year, more than \$300 million in federally matched payments are distributed to faculty practice groups and safety net hospitals in support of clinical teaching activities.<sup>64, 65</sup> Participation in the §438.6(c) program requires state general revenue or intergovernmental transfer (IGT) funding; however, no Florida community clinics currently participate because they lack access to state or IGT financing. These payments are tied to Medicaid-specific quality measures, such as access to care, chronic disease control, and prenatal care, rather than to residency training outcomes, and therefore represent another opportunity to strengthen GME accountability.

Beyond traditional Medicaid and Medicare GME pathways, Florida has expanded training capacity through the Training, Education, and Clinicals in Health (TEACH) Program, which supports academic-community partnerships in outpatient and underserved settings (s. 409.91256, Florida Statute). Eligibility is limited to FQHC, rural clinics, and community mental health clinics, with enhanced awards available for community

health centers with GME-accredited programs. As a condition of participation, TEACH-funded sites are required to submit standardized quarterly reports on trainee participation, training settings, clinical hours, teaching expenses, and lost revenue because of teaching activity, which the state publishes in annual legislative reports that summarize program outputs and early outcomes.<sup>66,67</sup> The program also administers an annual trainee survey to assess training experiences and future workforce intentions. In its first year, TEACH-supported trainees reported increased interest in practicing in primary care settings and serving Medicaid populations, aligning with the program's stated workforce objectives, although long-term employment outcomes are not yet available. This reporting framework establishes an early accountability model that links public investment in training to measurable participant experiences and stated workforce intentions, while enabling future evaluation of practice outcomes.

## North Carolina

North Carolina has a large rural population, with a third of North Carolinians living in rural areas.<sup>68</sup> There has been a declining percentage of in-state medical school graduates and graduates of GME programs in North Carolina practicing primary care and rural locations in the state. Furthermore, the gap between rural and urban physician supply is worsening.<sup>69,70</sup> This physician workforce tracking data is available due to data infrastructure utilizing the North Carolina Medical Board's annual licensure files, maintained by the North Carolina Health Professions Data System at the UNC Cecil G. Sheps Center for Health Services Research in collaboration with North Carolina Area Health Education Center.<sup>71</sup> This data is gradually being used for GME planning. Ten rural-based programs exist (three in internal medicine and seven in family medicine) training 165 residents with greater than 50% of their time in rural sites.<sup>72</sup> Much of the growth has been catalyzed by federal start-up grants, with a few rural programs receiving state appropriations and marginal Medicaid GME funds. To bolster rural GME throughout the state, the legislature appropriated recurring and non-recurring dollars for the UNC System Rural Residency and Medical Education Training Fund.<sup>73</sup> An initial analysis was conducted of the existing physician training, workforce supply, and capacity of rural health facilities. For example, there are no rural general surgery residency programs yet the state has 25 rural counties with no general surgeon. Meanwhile, 21 rural hospitals in North Carolina have the procedure volume and case mix to meet at least 30% rural training time for accreditation requirements.<sup>72</sup> In response to this rural physician workforce crisis and capacity for rural GME through the state, a grant program has been developed to launch, grow, and sustain rural residency programs with flexibility such as lower rural training time requirements and a broader rural geographic definition. Notably, funding and expansion funding will be contingent on predetermined graduate in-state and rural retention.<sup>73</sup> Technical assistance is offered through the UNC Cecil G. Sheps Center for Health Services Research.<sup>72</sup>

Together, these state initiatives illustrate that meaningful GME innovation can occur where funding flexibility, accountability mechanisms, and cross-sector governance align. Across states, approaches vary widely in design and scope, but common features include the use of Medicaid and state appropriations to complement federal GME financing, increasing reliance on workforce data to inform investment decisions, and efforts to link public funding with measurable workforce outcomes.

## Re-Centering Accountability at the Federal Level

Collectively, these state-level initiatives demonstrate that meaningful progress in aligning GME policy with physician workforce needs is possible when financing flexibility, data infrastructure, and accountability mechanisms converge. However, reliance on state-led innovation alone presents important limitations. Not all states possess the political will, fiscal capacity, or technical infrastructure to reform GME policy, resulting in uneven adoption and persistent geographic disparities. Moreover, GME financing is fundamentally national in scope, with federal dollars comprising a substantial share of total investment (i.e., Medicare, Medicaid, THCGME, VA), underscoring a federal responsibility for stewardship and accountability. State efforts also tend to operate in isolation, limiting opportunities for shared learning, standardization of outcomes, and efficient diffusion of effective models across jurisdictions. Finally, physician workforce challenges, particularly specialty shortages, interstate migration, and regional maldistribution, extend beyond state boundaries and require a national perspective that individual states cannot fully address. These constraints highlight the need for stronger federal leadership to establish shared goals, common metrics, and coordinating mechanisms that can align GME outcomes with population health needs while supporting state innovation.

## Conclusion

Graduate medical education is at a critical inflection point. Public investment in GME—anchored in federal programs such as Medicare, Medicaid, The Health Resources and Services Administration, the Department of Defense, and the Department of Veterans Affairs, and increasingly supplemented by state funding—has grown substantially in scale and complexity. Despite this investment, enduring physician workforce challenges related to specialty shortages, geographic maldistribution, and inequitable access to care remain unresolved.

Recent federal legislative and regulatory changes, together with a growing number of state-led initiatives, provide important proof points that GME policy can shape workforce outcomes. Yet these efforts have largely emerged as discrete, localized responses to specific needs rather than as components of a coordinated national approach. As a result, progress has been incremental, unevenly distributed across states and regions, and characterized by wide variation in design and sustainability. More broadly, Medicare's GME financing framework offers limited flexibility to reallocate resources across specialties, settings, and training models in response to evolving population health needs. Limited coordination across federal and state financing streams has reinforced a siloed approach to GME reform, constraining opportunities for shared learning, replication, and broader system-level impact.

A central limitation continues to be the absence of a coherent national framework for GME accountability. Despite decades of analysis, the United States lacks a shared set of goals, standardized outcome measures, or an integrated data infrastructure capable of linking public investment in GME to workforce and population health outcomes. As prior IOM and NASEM efforts have noted, this gap constrains policymakers' ability to assess return on investment, compare approaches across jurisdictions, or systematically scale effective models.

At the same time, emerging tools and data sources—including licensure data, workforce analytics, and performance metrics—suggest that more robust accountability is increasingly feasible. Some states are already using these tools to guide investment decisions, monitor outcomes, and condition funding on workforce results. Federal policymakers face related but more complex challenges: balancing flexibility, equity, fiscal stewardship, and national workforce priorities within long-standing statutory and regulatory constraints.

More than a decade ago, in 2014, the Institute of Medicine recommended the creation of a multi-stakeholder GME Policy Council in the U.S. Department of Health and Human Services to provide strategic leadership for Medicare GME. The proposed council would have been responsible for developing a national strategy for Medicare GME financing, assessing workforce sufficiency across specialties and regions, informing future federal policy, and issuing annual progress reports on the state of GME. The IOM also recommended establishing a GME Center within the Centers for Medicare & Medicaid Services to manage the operational aspects of GME funding and to improve transparency through systematic data collection and reporting on the use of GME funds. Together, these entities were intended to strengthen accountability for federal GME investment and ensure closer alignment between GME financing, workforce outcomes, and evolving health system needs. It aimed to address issues such as the distribution of residency positions, the quality of training, and the alignment of GME with healthcare delivery trends. In 2024, a bipartisan bill aimed to implement the GME Policy Council, but did not garner enough support to become law.<sup>74</sup> Achieving meaningful accountability at national scale will likely require congressional action to establish clear federal authority, responsibility, and expectations for workforce outcome measurement and reporting.

The NASEM workshop *“Exploring Opportunities to Improve Patient Access to Care through Strategic Changes to Graduate Medical Education”* will provide a neutral forum to examine these issues and discuss potential next steps. There is growing concern that the “drumbeat” for accountability could lead to calls to reduce GME investment if public funding cannot demonstrate alignment with population needs. By bringing together federal and state policymakers, educators, researchers, and other stakeholders, the workshop aims to clarify the role of accountability in GME policy, explore lessons from recent reforms and state initiatives, and surface key questions to inform future analysis, dialogue, and policy development.

## Questions for Workshop Dialogue

### **1. Accountability**

What mechanisms can ensure that federal GME funding aligns with national health priorities? Should funding be tied to specific workforce outcomes, and if so, how? How is accountability monitored and enforced?

### **2. Metrics and Data**

Which GME outcomes should be tracked to assess alignment with workforce and population health needs? How can data infrastructure be strengthened to support this work? What additional data are needed, and who should be responsible for data collection, reporting, and public transparency?

### **3. Access**

How can lessons from smaller scale strategic GME investments aimed at addressing disparities in access to care – particularly in rural and underserved areas -- inform policy choices across the broader GME financing system?

#### **4. Collaboration and Governance**

What roles should federal agencies, accrediting bodies, medical associations, states, and teaching institutions play in shaping a more coordinated GME financing strategy? How can existing silos across these actors be broken down? What would a Federal GME Policy Council look like?

#### **5. Financing Reform**

How should proposed changes to GME financing be evaluated in terms of workforce impact, equity, and long-term sustainability? What safeguards would be needed to protect vulnerable populations and training environments?

#### **6. Innovation and Scaling**

What can be learned from state-level GME initiatives? Under what conditions might successful models be scaled, adapted, or supported at a national level?

## References

1. Coggeshall, Lowell T. Planning for Medical Progress through Education; a Report Submitted to the Executive Council of the Association of American Medical Colleges. Association of American Medical Colleges; 1965.
2. NRMP Releases 2025. Main Residency Match Results and Data Report, Providing In-Depth Insight into the Largest Residency Match in History. NRMP. May 29, 2025. Accessed January 6, 2026. <https://www.nrmp.org/about/news/2025/05/nrmp-releases-2025-main-residency-match-results-and-data-report-providing-in-depth-insight-into-the-largest-residency-match-in-history/>.
3. Fraher EP, Rains JA, Bacon TJ, Spero J, Hawes E. Lessons Learned From State-Based Efforts to Leverage Medicaid Funds for Graduate Medical Education. *Acad Med.* 2024;99(10):1140. doi:10.1097/ACM.0000000000005678.
4. Marco A. Villagrana. Medicare Graduate Medical Education, 2025. Congressional Research Service; 2025:2. Accessed January 6, 2026. <https://www.congress.gov/crs-product/IF13088>.
5. Phillips RLJ, George BC, Holmboe ES, Bazemore AW, Westfall JM, Bitton A. Measuring Graduate Medical Education Outcomes to Honor the Social Contract. *Acad Med.* 2022;97(5). [https://journals.lww.com/academicmedicine/Fulltext/2022/05000/Measuring\\_Graduate\\_Medical\\_Education\\_Outcomes\\_to.15.aspx](https://journals.lww.com/academicmedicine/Fulltext/2022/05000/Measuring_Graduate_Medical_Education_Outcomes_to.15.aspx).
6. Topmiller M, Peterson L, Jabbarpour Y, Bazemore A, Carrozza M. Proximity to Residency Training Programs Still Matters for Practice Location. *Ann Fam Med.* 2025;23(Supplement 1). doi:10.1370/afm.23.s1.7639.
7. Fagan EB, Gibbons C, Finnegan SC, et al. Family Medicine Graduate Proximity to Their Site of Training. *Fam Med.* 2015;47(2):124-130.
8. Cogbill TH, Jarman BT. Rural General Surgery Training: The Gundersen Lutheran Approach. *Surgical Clinics of North America.* 2009;89(6):1309-1312. doi:10.1016/j.suc.2009.07.006.
9. Mercier PJ, Skube SJ, Leonard SL, et al. Creating a Rural Surgery Track and a Review of Rural Surgery Training Programs. *J Surg Educ.* 2019;76(2):459-468. doi:10.1016/j.jsurg.2018.09.004.
10. Patterson DG, Shipman SA, Pollack SW, et al. Growing a rural family physician workforce: The contributions of rural background and rural place of residency training. *Health Serv Res.* Published online May 9, 2023. doi:10.1111/1475-6773.14168.
11. Bazemore A, Wingrove P, Petterson S, Peterson L, Raffoul M, Phillips Jr RL. Graduates of Teaching Health Centers Are More Likely to Enter Practice in the Primary Care Safety Net. *Am Fam Physician.* 2015;92(10):868.
12. Russell DJ, Wilkinson E, Petterson S, Chen C, Bazemore A. Family Medicine Residencies: How Rural Training Exposure in GME Is Associated With Subsequent Rural Practice. *J Grad Med Educ.* 2022;14(4):441-450. doi:10.4300/JGME-D-21-01143.1.
13. Phillips RL, Petterson S, Bazemore A. Do residents who train in safety net settings return for practice? *Acad Med.* 2013;88(12):1934-1940. doi:10.1097/acm.000000000000025.
14. Phillips, Robert L, Dodoo, Martey S, Petterson, Stephen, et al. Specialty and Geographic Distribution of the Physician Workforce: What Influences Medical Student and Resident Choices? Robert Graham Center; 2009. <https://www.graham-center.org/dam/rgc/documents/publications-reports/monographs-books/Specialty-geography-compressed.pdf>.
15. Chen C, Xierali I, Piwnica-Worms K, Phillips R. The Redistribution Of Graduate Medical Education Positions In 2005 Failed To Boost Primary Care Or Rural Training. *Health Affairs.* 2013;32(1):102-110. doi:10.1377/hlthaff.2012.0032.
16. Fraher EP, Lombardi B, Brandt B, Hawes E. Improving the Health of Rural Communities Through Academic-Community Partnerships and Interprofessional Health Care and Training Models. *Acad Med.* 2022;97(9):1272. doi:10.1097/ACM.0000000000004794.
17. Hawes EM, Lombardi B, Adhikari M, et al. Physician Training In Rural And Health Center Settings More Than Doubled, 2008-24: Article examines trends in medical residency training in rural and federally qualified health center settings. *Health Affairs.* 2025;44(5):572-579. doi:10.1377/hlthaff.2024.01297.

18. Council on Graduate Medical Education. Strengthening the rural health workforce to improve health outcomes in rural communities: 24th report to the U.S. Secretary of Health and Human Services and the U.S. Congress. Health Resources and Services Administration; April 2022. Accessed January 12, 2026.  
<https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/graduate-medical-edu/reports/cogme-april-2022-report.pdf>.
19. United States General Accountability Office. Physician Workforce: Locations and Types of Graduate Training Were Largely Unchanged, and Federal Efforts May Not Be Sufficient to Meet Needs. U.S. General Accountability Office; 2017. <https://www.gao.gov/assets/gao-17-411.pdf>.
20. Institute of Medicine (U.S.), Committee on the Governance and Financing of Graduate Medical Education, Eden J, Berwick DM, Wilensky GR. Graduate Medical Education That Meets the Nation's Health Needs.; 2014. Accessed November 18, 2020. <http://public.ebookcentral.proquest.com/choice/publicfullrecord.aspx?p=3379362>.
21. Robert Graham Center for Policy Studies in Family Medicine & Primary Care. Social Deprivation Index (SDI). Published November 5, 2018. Accessed November 29, 2021. <https://www.graham-center.org/maps-data-tools/social-deprivation-index.html>.
22. United States General Accountability Office. Physician Workforce: HHS Needs Better Information to Comprehensively Evaluate Graduate Medical Education Funding | U.S. GAO. March 9, 2018. Accessed May 5, 2024. <https://www.gao.gov/products/gao-18-240>.
23. MedPAC. June 2010 MEDPAC Report to Congress: Chapter 4: GME Financing. Medicare Payment Advisory Commission; 2010. Accessed July 7, 2020. [http://www.medpac.gov/docs/default-source/reports/Jun10\\_EntireReport.pdf?sfvrsn=0](http://www.medpac.gov/docs/default-source/reports/Jun10_EntireReport.pdf?sfvrsn=0).
24. Institute of Medicine. Primary Care Physicians: Financing Their Graduate Medical Education in Ambulatory Settings. The National Academies Press; 1989. <https://nap.nationalacademies.org/catalog/1487/primary-care-physicians-financing-their-graduate-medical-education-in-ambulatory>.
25. AMA Council on Medical Education. Accountability and Transparency in Graduate Medical Education Funding. American Medical Association; 2016. <https://www.ama-assn.org/system/files/2021-06/a16-cme-05.pdf>.
26. Council on Graduate Medical Education (U.S.). Improving Value in Graduate Medical Education. Health Resources and Services Administration; 2013. <https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/graduate-medical-edu/reports/aug-2013.pdf>.
27. Medicare Payment Advisory Commission. Report to the Congress: Aligning Incentives in Medicare. Washington, DC: Medicare Payment Advisory Commission; 2010. Chapter 4: Graduate medical education financing: Focusing on educational priorities. Accessed January 12, 2026. [https://www.medpac.gov/wp-content/uploads/import\\_data/scrape\\_files/docs/default-source/reports/Jun10\\_EntireReport.pdf](https://www.medpac.gov/wp-content/uploads/import_data/scrape_files/docs/default-source/reports/Jun10_EntireReport.pdf).
28. U.S. Government Accountability Office. Health care workforce: comprehensive planning by HHS needed to meet national needs. Washington, DC: U.S. Government Accountability Office; 2015. GAO-16-17. Accessed January 12, 2026. <https://www.gao.gov/assets/gao-16-17.pdf>.
29. National Academies of Sciences. Graduate Medical Education Outcomes and Metrics: Proceedings of a Workshop. National Academies Press; 2018. <https://nap.nationalacademies.org/catalog/25003/graduate-medical-education-outcomes-and-metrics-proceedings-of-a-workshop>.
30. Coronavirus Aid, Relief, and Economic Security Act, Pub L No. 116-136, 134 Stat 281 (2020). Accessed January 12, 2026. <https://www.govinfo.gov/app/details/PLAW-116publ136>.
31. U.S. Department of Health and Human Services. Health workforce strategic plan 2021. Washington, DC: U.S. Department of Health and Human Services; 2021. Accessed January 12, 2026.  
<https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/about-us/hhs-health-workforce-strategic-plan-2021.pdf>.
32. Mullan F, Chen C, Steinmetz E. The Geography Of Graduate Medical Education: Imbalances Signal Need For New Distribution Policies. *Health Affairs*. 2013;32(11):1914-1921. doi:10.1377/hlthaff.2013.0545.

33. Blanchard J, Petterson S, Bazemore A, Watkins K, Mullan F. Characteristics and Distribution of Graduate Medical Education Training Sites: Are We Missing Opportunities to Meet U.S. Health Workforce Needs? *Acad Med.* 2016;91(10).  
[https://journals.lww.com/academicmedicine/Fulltext/2016/10000/Characteristics\\_and\\_Distribution\\_of\\_Graduate.27.aspx](https://journals.lww.com/academicmedicine/Fulltext/2016/10000/Characteristics_and_Distribution_of_Graduate.27.aspx).
34. Weida NA. Does Graduate Medical Education Also Follow Green? *Arch Intern Med.* 2010;170(4):389. doi:10.1001/archinternmed.2009.529.
35. Adhikari M, Hawes EM, Holmes GM, Rodefeld L. Overview of residency programs selected for Consolidated Appropriations Act Section 126 round three graduate medical education slots. Published January 2025. Accessed January 22, 2026. <https://www.ruralgme.org/research>.
36. Hawes EM, Holmes M, Fraher EP, et al. New Opportunities for Expanding Rural Graduate Medical Education to Improve Rural Health Outcomes: Implications of the Consolidated Appropriations Act of 2021. *Acad Med.* 2022;97(9):1259-1263. doi:10.1097/ACM.0000000000004797.
37. Hawes EM, Rodefeld L, Weinstein DF. Academic Medicine and Rural Health System Partnerships: Enhancing Education While Advancing Physician Workforce Priorities. *Acad Med.* 2024;99(10):1065-1069. doi:10.1097/ACM.0000000000005753.
38. Rains J, Holmes GM, Pathak S, Hawes EM. The distribution of additional residency slots to rural and underserved areas. *JAMA.* 2023;330(10):968-969. doi:10.1001/jama.2023.14452.
39. Adhikari M, Baker M, Cunningham B, Holmes GM, Rodefeld L, Hawes E.. Section 131: A Lifeline on Its Last Breath. Association of American Medical Colleges. <https://www.aamc.org/about-us/mission-areas/health-care/section-131>.
40. Centers for Medicare & Medicaid Services. Regulatory provisions to promote innovation, flexibility, and improvement in patient care: hospital and critical access hospital changes; final rule. *Fed Regist.* 2019;84(189):51732. <https://www.govinfo.gov/content/pkg/FR-2019-09-30/pdf/2019-20736.pdf>.
41. Rodefeld L, Adhikari M, Horger CK, Boll J, Hawes EM. The evolving role of critical access hospitals in rural physician training. *JAMA Health Forum.* 2025;6(10):e254742. doi:10.1001/jamahealthforum.2025.4742.
42. Rural Graduate Medical Education. RuralGME.org. Accessed December 15, 2025. <https://www.ruralgme.org/>.
43. Health Resources and Services Administration. Teaching Health Center Graduate Medical Education (THCGME) Academic Year 2023-2024 awardees. Bureau of Health Workforce, HRSA. Accessed December 15, 2025. <https://bhw.hrsa.gov/funding/apply-grant/teaching-health-center-graduate-medical-education/ay2023-2024-awardees>.
44. Davis CS, Roy T, Peterson LE, Bazemore AW. Evaluating the Teaching Health Center Graduate Medical Education model at 10 years: practice-based outcomes and opportunities. *J Grad Med Educ.* 2022;14(5):599-605. doi:10.4300/JGME-D-22-00187.1.
45. Hawes EM, Adhikari M, Rains J, et al. Evaluating teaching health center planning and development: Unlocking and sustaining the full potential of the Teaching Health Center Program. *J Grad Med Educ.* 2025;17(3):296-303. doi:10.4300/JGME-D-24-00593.1.
46. Veterans Health Administration Office of Academic Affiliations. VA MISSION Act §403. Accessed January 23, 2025. <https://www.va.gov/oaa/mission-403.asp>.
47. Tobey M, Toedt M, Hawes E, et al. The landscape of physician residency training in the Indian Health System. *J Health Care Poor Underserved.* 2025;36(3):1039-1053. doi:10.1353/hpu.2025.a967347.
48. Indian Health Service. Division of Academic Affairs. U.S. Department of Health and Human Services. Accessed January 12, 2026. <https://www.ihs.gov/OCPHI/division-of-academic-affairs/>.
49. Tobey M, Adhikari M, Holmes GM, et al. Comparing Indian Health Service sites to rural physician teaching hospitals. *JAMA Intern Med.* 2025;185(8):1040-1042. doi:10.1001/jamainternmed.2025.1827.
50. Henderson TM. Medicaid Graduate Medical Education Payments: Results From the 2022 50-State Survey. Washington, DC: Association of American Medical Colleges; 2023. Accessed January 16, 2026. [https://store.aamc.org/downloadable/download/sample/sample\\_id/590/](https://store.aamc.org/downloadable/download/sample/sample_id/590/).

51. Quinn G, et al. Graduate medical education initiatives to develop the physician workforce in rural Wisconsin. *Wis Med J*. 2018;117(5).
52. Rural Health Information Hub. Wisconsin Collaborative for Rural Graduate Medical Education project summary. Published 2012. Accessed January 12, 2026. <https://www.ruralhealthinfo.org/project-examples/712>.
53. Wisconsin Legislative Council. 2023 Wisconsin Act 185: Expanding graduate medical training grants. Published April 2024.
54. National Association of Community Health Centers. Adapting a state funding model to provide technical assistance for the development of residency programs: Wisconsin Collaborative for Rural Graduate Medical Education. Bethesda, MD: National Association of Community Health Centers; 2024.
55. Indiana General Assembly. House Enrolled Act 1323 (2015): Establishing the Graduate Medical Education Board and Medical Residency Education Fund. Published 2015.
56. Indiana Commission for Higher Education. Graduate Medical Education Board. Accessed December 16, 2025. <https://www.in.gov/che/boards-and-committees/graduate-medical-education-board/>.
57. Indiana Commission for Higher Education. Indiana Graduate Medical Education feasibility study grant request for proposals. Published 2025. Accessed January 16, 2026. <https://www.in.gov/che/files/2025-Feasibility-Study-RFP.pdf>.
58. Indiana Commission for Higher Education. Indiana Graduate Medical Education program development grant request for proposals. Published 2015. Accessed January 16, 2026. <https://www.in.gov/che/files/New-Residency-Program-Development-Grant-FINAL.pdf>.
59. Indiana Commission for Higher Education. Indiana Graduate Medical Education residency expansion grant request for proposals. Published 2024. Accessed January 16, 2026. [https://www.in.gov/che/files/Expansion-Grant-RFP\\_20240613.pdf](https://www.in.gov/che/files/Expansion-Grant-RFP_20240613.pdf).
60. Indiana Rural Health Association. Rural graduate medical education: Panel discussion. Presented at: 2024 Policy Conference; November 21, 2024; Plainfield, IN. Panelists: Knight C, MD; Norrington L; Rodefeld L, MS.
61. Norrington L, Rodefeld L, Knight C. Graduate medical education policy and workforce development. Presented at: Indiana Rural Health Association Public Policy Forum; November 21, 2024; Indiana.
62. Association of American Medical Colleges. GME fact sheet: physician training by the numbers (Florida). Washington, DC: Association of American Medical Colleges; 2025. Accessed January 22, 2026. <https://www.aamc.org/media/65831/download>.
63. Office of Program Policy Analysis and Government Accountability. Graduate medical education in Florida. Tallahassee, FL: Office of Program Policy Analysis and Government Accountability; December 2023. Accessed January 22, 2026. <https://www.oppaga.fl.gov/Documents/Reports/23-GME.pdf>.
64. Agency for Health Care Administration. Medicaid reimbursement rates and supplemental payment programs overview. Presented to the House Health & Human Services Appropriations Subcommittee; February 14, 2023. Accessed January 22, 2026. [https://ahca.myflorida.com/content/download/20776/file/House\\_HHS\\_Approps-Medicaid\\_Supplemental\\_Programs\\_Overview.pdf](https://ahca.myflorida.com/content/download/20776/file/House_HHS_Approps-Medicaid_Supplemental_Programs_Overview.pdf).
65. Florida Agency for Health Care Administration. Medicaid State Plan Amendment FL-24-0006: graduate medical education supplemental payment program. Published 2024. Accessed January 22, 2026. <https://www.medicaid.gov/medicaid/spa/downloads/FL-24-0006.pdf>.
66. Agency for Health Care Administration. Medicaid program finance: graduate medical education supplemental payment operations. Accessed January 22, 2026. <https://ahca.myflorida.com/medicaid/medicaid-finance-and-analytics/medicaid-program-finance/lip-dsh-gme-operations/teach>.
67. Agency for Health Care Administration. Training, Education, and Clinicals in Health (TEACH) funding program annual report, SFY 2024-2025. Tallahassee, FL: Agency for Health Care Administration; December 1, 2025. Accessed January 22, 2026. <https://ahca.myflorida.com/content/download/27543/file/2025%20TEACH%20Report.pdf>.

68. UNC Cecil G. Sheps Center for Health Services Research NC Rural Health Research Program. Rural Health Transformation Program rural facility and population score estimates by state. Accessed December 4, 2025. <https://www.shepscenter.unc.edu/programs-projects/rural-health/projects/rural-health-transformation-program-resources/rural-facility-and-population-score-estimates-by-state/>.
69. Galloway E, Tilson H. Outcomes of NC medical school graduates: how many stay in practice in NC, in primary care, and in high-need areas? Sheps Health Workforce NC; 2025. Accessed December 4, 2025. <https://www.shepscenter.unc.edu/wp-content/uploads/2025/07/NC-AHEC-Annual-Report-April-2025.pdf>.
70. Galloway E, Lombardi B, Fraher E. The workforce outcomes of physicians completing residency training in North Carolina in 2017, 2018, and 2019. Sheps Health Workforce NC; 2025. Accessed December 4, 2025. <https://nchealthworkforce.unc.edu/reports/gme-tracking-2025/>.
71. Sheps Health Workforce NC. NC Health Workforce. Accessed January 16, 2026. <https://nchealthworkforce.unc.edu/>.
72. North Carolina Graduate Medical Education (NCGME) Technical Assistance Center. NCGME.org. Accessed December 13, 2025. <https://www.ncgme.org/>.
73. UNC System. Rural health care workforce. University of North Carolina System. Accessed January 16, 2026. <https://www.northcarolina.edu/rural-health/>.
74. Cassidy B, Cortez Masto C, Cornyn J, Bennet M. Cassidy, Cortez Masto, Cornyn, Bennet introduce bipartisan draft legislation to help teaching hospitals train more doctors and address workforce shortages. U.S. Senator Bill Cassidy Press Release. December 18, 2024. Accessed January 8, 2026. <https://www.cassidy.senate.gov/newsroom/press-releases/cassidy-cortez-masto-cornyn-bennet-introduce-bipartisan-draft-legislation-to-help-teaching-hospitals-train-more-doctors-and-address-workforce-shortages/>.